

Japanese Pronoun *Sore* in Pronominal Fragments and (Pseudo-)Clefts

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1. Introduction

This paper considers the use of the pronoun *sore* “it” in Japanese that is exemplified in (1).¹

- (1) a. A: John-ga kinoo dareka-ni at-ta rasii.
John-Nom yesterday someone-Dat meet-Past seem
“It seems that John met someone yesterday.”
B: **Sore-wa** Mary-ni da-yo.
It-Top Mary-Dat be
“It is Mary.”
- b. A: John-ga kinoo Susan-ni at-ta.
John-Nom yesterday Susan-Dat meet-Past
“John met Susan yesterday.”
B: Iya, **sore-wa** Mary-ni da-yo.
no **it-Top** Mary-Dat be
“No, it is Mary.”
- c. John-ga dareka-ni at-ta ga,
John-Nom someone-Dat meet-Past but
watasi-wa **sore-ga** dare-ni (da) ka wakara-nai.
I-Top **it-Nom** who-Dat (be) Q know-not
“John met someone, but I don’t know who it is.”

In (1a), the utterance of speaker A involves an indefinite expression *dareka* “someone” and the utterance of speaker B serves to identify this “someone” as Mary. In (1b), B denies part of what A said, i.e., *Susan*, and replaces it with *Mary*. (1c) is an example of Japanese Sluicing with a pronominal subject (which I will call “Pronominal Sluicing”).² The first conjunct of (1c) contains an indefinite expression “someone,” and the denotation of the fragment wh-phrase *dare-ni* “who-Dat” in the second conjunct is identical to who the “someone” is. In all the examples in (1), the pronominal subject *sore-wa/ga* “it-Top/Nom” is followed by some fragment phrase.³ I will call these examples “Pronominal Fragments.”

The basic use of the pronoun *sore* is to denote an entity. In (2), *sore* takes the DP “apple” in the first conjunct as its antecedent.

- (2) John-wa ringo₁-o kat-te, **sore₁-o** tabe-ta.
John-Top apple-Acc buy-and **it-Acc** eat-Past
“John bought an apple and ate it.”

On the other hand, *sore* in (1) does not have such a DP antecedent. One might think, for example, *sore* in (1a) refers to *dareka* “someone,” as the utterance B in (1a) is roughly synonymous with “the *someone* is Mary.” That cannot be the case, however, given that DP-denoting *sore* can only refer to an inanimate DP. (3) shows that the inanimate pronoun *sore* cannot be the antecedent of the animate DP “someone.”

- (3) John-wa dareka₁-ni at-te, ***sore₁-ni**/sono hito₁-ni ayamata-ta.
John-Top someone-Dat meet-and **it-Dat**/that person-Dat apologize-Past

“John met someone₁ and apologized to *it₁/that person₁.”

Thus, *sore* in (1) does not seem to refer to an entity. Here, questions arise as to what *sore* in (1) denotes and why it shows different properties from the DP-denoting *sore*.

This paper considers the properties of *sore* in Pronominal Fragments and shows that although *sore* in (1) has a pronominal form, it has some properties that cannot be explained under the assumption that it is a mere DP; for example, sentences like (1) show connectivity effects of the fragment DP that follows *sore* (Section 2). I would like to show that such properties of *sore* are compatible with the claim by Kizu (1997, 1999), Nakao and Yoshida (2005) and others that *sore* in Pronominal Sluicing such as (1c) corresponds to the presuppositional clause of a cleft; similarly, I will propose that sentences (1a, b) are also derived from a cleft sentence (Section 3). As a result, the peculiar properties of *sore* in Pronominal Fragments, such as island effects, are straightforwardly explained (Section 4). I will further show that the analysis of Pronominal Fragments can be adapted to the analysis of *sore* that co-occurs with Head-Internal Relative Clauses (Section 5).

2. Clausal Properties of *Sore* in Pronominal Fragments

Sore in Pronominal Fragments has some properties that cannot be explained under the assumption that it is a mere DP. First, the fragment DP that follows *sore* shows the Binding Connectivity effect; the DP is not interpreted in its surface position, but behaves as if it were “connected” to some other position with respect to Binding Conditions. (See Hankamer (1974) and others.) Let us look at the examples in (4).⁴

- (4) a. A: John₁-ga dareka-o hihansi-ta rasii.
John-Nom someone-Acc criticize-Past seem
“It seems that John₁ criticized someone.”
B: Sore-wa zibun-zisin₁-o da-yo.
It-Top self-self-Acc be
“It is himself₁.”
- b. A: John₁-ga Susan-o hihansi-ta.
John-Nom Susan-Acc criticize-Past
“John₁ criticized Susan.”
B: Iya, sore-wa zibun-zisin₁-o da-yo.
no it-Top self-self-Acc be
“No, it is himself₁.”
- c. John₁-ga dareka-o hihansi-ta ga,
John-Nom someone-Acc criticize-Past but
watasi-wa sore-ga zibun-zisin₁-o kadooka wakara-nai.
I-Top it-Nom self-self-Acc whether know-not
“John₁ criticized someone, but I don’t know whether it is himself₁.”

The anaphor *zibun-zisin* “self-self” in the Pronominal Fragments in (4) can refer to *John* in the previous sentence. This is unexpected given Binding Condition A of Chomsky (1981), which states that anaphors must be bound in the local domain.⁵

Similarly, the fragment cannot be a pronoun that is coreferential with the element in the previous sentence. If the anaphor *zibun-zisin* “self-self” is replaced with *kare* “him” in the above context, the examples exhibit the Condition B effect; the pronoun cannot refer to *John*, as shown in (5).

- (5) a. B: *Sore-wa kare₁-o da-yo.
It-Top he-Acc be
“It is him₁.”
- b. B: *Iya, sore-wa kare₁-o da-yo.

no it-Top him-Acc be
 “No, it is him₁.”

- c. *John₁-ga dareka-o hihansi-ta ga,
 John-Nom someone-Acc criticize-Past but
 watasi-wa sore-ga kare₁-o kadooka wakara-nai.
 I-Top it-Nom him-Acc whether know-not
 “John₁ criticized someone, but I don’t know whether it is him₁.”

Second, as pointed out by Kondo (1990), for the negation context such as (1b), the fragment DP that follows *sore* shows Case/Postposition Connectivity. The Case-marker/postposition that attaches to the fragment DP is determined according to the Case-marker/postposition on the corresponding DP in the previous sentence, as illustrated in (6) and (7).

- (6) A: John-ga Susan-**o** home-ta-yo.
 John-Nom Susan-**Acc** praise-Past
 “John praised Susan.”
 B: Iya, sore-wa Mary-**o** da-yo.
 no it-Top Mary-**Acc** be
 “No, it is Mary.”
- (7) A: John-ga Susan-**to** kenkasi-teiru-yo.
 John-Nom Susan-**with** fight-Prog
 “John is fighting with Susan.”
 B: Iya, sore-wa Mary-**to** da-yo.
 no it-Top Mary-**with** be
 “No, it is with Mary.”

Speaker B negates *Susan* that appeared in A’s utterance and identifies the relevant individual as *Mary*. In (6), *Susan* in A’s utterance has the Case-marker *-o* “Acc,” and in (7), it has the postposition *to* “with.” The fragment DP *Mary* in the Pronominal Fragment is also followed by the same Case-marker/postposition. Kondo notes that, if *sore* were a DP-denoting pronoun taking *Susan* as its antecedent, it is mysterious why the antecedent *Susan* cannot appear in place of *sore*. Note that the Japanese copula construction “DP₁ is DP₂” does not allow a Case-marker or a postposition on the predicate DP (DP₂), as summarized in (8).

- (8) a. DP₁-wa DP₂ da. b. *DP₁-wa DP₂-Case/P da.
 DP₁-Top DP₂ be DP₁-Top DP₂-Case/P be
 “DP₁ is DP₂.”

If the pronoun *sore* is replaced with the DP *Susan* in A’s utterance in (6) and (7), the ungrammatical sentences in (9) are generated.

- (9) a. *Susan-wa Mary-**o** da-yo
 Susan-Top Mary-**Acc** be
 “Susan is Mary(**Acc**).”
 b. *Susan-wa Mary-**to** da-yo
 Susan-Top Mary-**with** be
 “Susan is **with** Mary.”

Given this fact, it is not plausible to assume *sore* takes a DP as its antecedent.

These data showing connectivity effects cannot be accounted for under the assumption that *sore* is a mere DP. We need to assume that the pronominal subject in Pronominal Fragments involves some structure that provides an antecedent for the anaphor/pronoun in (4) and (5) and gives Case to the fragment DP in (6) and (7).

3. Pronominal Fragments as (Pseudo-)Clefts

Some of the previous studies on *sore* claim that *sore* actually has clausal status, despite the fact that it is a pronoun. For example, based on the Case Connectivity data in Section 2, Kondo (1990) argues that *sore* in (10a) refers to the CP illustrated in (10b), which includes an empty position *e*.

(10) a. A: John-ga Susan-o home-ta-yo.
John-Nom Susan-Acc praise-Past
“John praised Susan.”

B: Iya, sore-wa Mary-o da-yo.
no it-Top Mary-Acc be
“No, it is Mary.”

b. *sore* = [_{CP} [_{IP} John-ga e home-ta] no]
John-Nom praise-Past C

If we replace *sore* in (10a) with the CP structure in (10b), we obtain the cleft sentence in (11).

(11) [_{CP} [_{IP} John-ga e₁ home-ta] no]-wa Mary₁-o da-yo.
John-Nom praise-Past C-Top Mary-Acc be
“It is Mary that John praised.”

Thus, Kondo’s analysis virtually claims that the Pronominal Fragment in (10aB) corresponds to the cleft sentence in (11). Note that both the fragment DP in a Pronominal Fragment (e.g., *Mary* in (6)) and the focus of a cleft (e.g., *Mary* in (11)) can have a postposition or a Case-marker. This supports the claim that a cleft underlies Pronominal Fragments. Following Hoji (1990), I will call the cleft construction with a Case-marker/postposition “CM- (Case-Marked-) Cleft.”

Note that, as shown in (11), the focus of a cleft also shows Case Connectivity effects; the focus phrase *Mary* has Accusative Case, as if it were connected to the object position of the verb “praise” inside the presuppositional clause. Similarly, the focus of a cleft shows the Binding Connectivity effect, as shown in (12).

(12) [_{CP} [_{IP} John-ga e₁ home-ta] no]-wa zibun-zisin₁/*kare₁-o da.
John-Nom praise-Past C-Top himself/*him-Acc be
“It is himself₁/him₁ that John praised.”

In (12), the anaphor/pronoun in the focus position is interpreted in the empty object position *e* in the presuppositional clause with respect to Binding Conditions. If the cleft construction underlies Pronominal Fragments, the connectivity effects seen in Section 2 are naturally accounted for.

Similar to Kondo’s analysis of (6-7), Kuwabara (1997), Kizu (1997, 1999) and others claim that the cleft construction underlies Japanese Sluicing such as (1c).⁶ Under their analysis, the pronominal subject in the Pronominal Sluicing example (13a) corresponds to the presuppositional clause of the cleft in (13b).

(13) a. watasi-wa **sore-ga** dare-ni (da) ka wakara-nai (cf. (1c))
I-Top **it-Nom** who-to (be) Q know-not
“I don’t know who it is.”

b. watasi-wa [_{CP} [_{IP} John-ga t₁ at-ta] no]-ga dare-ni (da) ka wakara-nai.
I-Top John-Nom meet-past C-Nom who-to (be) Q know-not
“I don’t know who it is that John met.”

Kuwabara claims that *sore* in (13a) “replaces” the presuppositional clause in (13b). However, how the pronoun *sore* is generated in place of the presuppositional clause of the cleft remains unclear in these previous studies.

Nakao and Yoshida (2005) proceed with Kuwabara’s (1997) analysis and argue that Pronominal Sluicing in (14a) is derived from the (pseudo-)cleft with the definite determiner in (14b).⁷

- (14) a. John-ga dareka-ni at-ta ga,
 John-Nom someone-Dat meet-Past but
 watasi-wa sore-ga dare-ni (da) ka sira-nai
 I-Top it-Nom who-Dat (be) Q know-not
 “John met someone, but I don’t know who it is.”
- b. watasi-wa [_{DP} **sono** [_{CP} [_{IP} John-ga t₁ at-ta] no] D]-ga
 I-Top **the** John-Nom meet-Past C D-Nom
 dare₁-ni (da) ka sira-nai
 who-Dat (be) Q know-not
 “I don’t know who it is that John met.”
- c. watasi-wa [_{DP} **sore** [_{CP} [_{IP} ~~John-ga t₁ at-ta~~] ~~no~~] D]-ga
 I-Top **it** John-Nom meet-Past C D-Nom
 dare₁-ni (da) ka sira-nai
 who-Dat (be) Q know-not

In (14b), the cleft sentential subject involves a DP structure whose complement is a CP headed by the nominalizer *no* and [Spec, DP] is filled with a demonstrative *sono*. Nakao and Yoshida argue that the complement CP undergoes deletion, leaving the definite D and the demonstrative behind, as shown in (14c). The D head and the demonstrative *sore* are morphologically turned into the pronoun *sore*, presumably by the morphological requirement in Japanese to prohibit stranded demonstratives. This is how Pronominal Sluicing is derived.

Nakao and Yoshida’s analysis is advantageous compared to the previous studies in two respects. First, they assume a layer of DP and CP as an underlying structure of the pronoun *sore*. It naturally explains how *sore* in Pronominal Sluicing shows both properties of a nominal and properties of a clause. Second, they propose a concrete idea of how the form *sore* is derived from the underlying structure; they assume the morphological transformation of the demonstrative *sono* into the pronoun *sore*. It is not an unreasonable assumption, given that *sore* and *sono* are morphologically and semantically related.

In this paper, I would like to apply the same underlying structure of cleft with a definite demonstrative to other types of Pronominal Fragments such as (1a) and (1b). I assume that the B sentences in (1a) and (1b) have the underlying structure in (15a).

- (15) a. B: [_{DP} **sono** [_{CP} [_{IP} **John-ga kinoo t₁ at-ta**] **no**]]-wa Mary₁-ni da-yo.
 the John-Nom yesterday meet-Past C-Top Mary-Dat be
 “It is Mary that John met yesterday.”
- b. B: [_{DP} **sore** [_{CP} [_{IP} ~~John-ga kinoo t₁ at-ta~~] ~~no~~]]-wa Mary₁-ni da-yo.
 the John-Nom yesterday meet-Past C-Top Mary-Dat be

Just as in the case of Pronominal Sluicing, the demonstrative *sono* is turned into the pronoun *sore* after the deletion of the complement CP, as shown in (15b). This way we can explain the connectivity effects seen in all three types of Pronominal Fragment constructions.

4. Island Effects and Pronominal Fragments

One advantage of the analysis in Section 3 is that it can explain why Pronominal Fragments show island effects. In (16), the fragment cannot take an element inside the complex NP as the target of identification.

- (16) a. A: John-ga [[**dareka-ni** tegami-o kai-ta] hito]-o home-ta rasii.
 John-Nom **someone-to** letter-Acc write-Past person-Acc praise-Past seem
 “It seems that John praised a person who wrote a letter to someone.”
- B: *Sore-wa **Mary-ni** da-yo.”

It-Top **Mary-to** be

“It is to Mary.”

- b. A: John-ga [[**Susan-ni** tegami-o kai-ta] hito]-o home-ta.
John-Nom **Susan-to** letter-Acc write-Past person-Acc praise-Past
“John praised a person who wrote a letter to Susan.”

B: *Iya, sore-wa **Mary-ni** da-yo.”

no it-Top **Mary-to** be

“No, it is to Mary.”

- c. *John-ga [[**dareka-ni** tegami-o kai-ta] hito]-o home-ta ga,
John-Nom **someone-to** letter-Acc write-Past person-Acc praise-Past but
watasi-wa sore-ga **dare-ni** (da) ka wakara-nai.

I-Top it-Nom **who-to** (be) Q know-not

“John praised a person who wrote a letter to someone, but I don’t know to whom it is.”

This fact naturally follows from our analysis of Pronominal Fragments as CM-cleft, because CM-clefts also show island effects as shown in (17).⁸

- (17) *[John-ga [[Op₂ [t₂ t₁ tegami-o kai-ta] hito₂]-o home-ta no]-wa
John-Nom letter-Acc write-Past person-Acc praise-Past C-Top

Mary-ni₁ da.

Mary-Dat be

“It is to Mary that John praised [the person who wrote a letter *t*].”

Based on the presence of island effects, Hoji (1990) claims that CM-cleft involves operator movement as shown in (18).⁹

- (18) [Op₁ [John-ga t₁ tegami-o kai-ta no]]-wa Mary-ni₁ da.

John-Nom letter-Acc write-Past C-Top Mary-to be

“It is to Mary that John wrote a letter.”

On the other hand, if the postposition/Case-marker on the focus of the cleft is omitted, the island effect disappears, as shown in (19). Hoji calls this type of cleft “Non-CM-cleft.”

- (19) [John-ga [[e tegami-o kai-ta] hito]-o home-ta no]-wa Mary da.

John-Nom letter-Acc write-Past person-Acc praise-Past C-Top Mary be

“It is to Mary that John praised [the person who wrote a letter *t*].”

Hoji claims that a Non-CM-cleft is licensed by what he calls the “aboutness condition”. (19) is licensed if the conversation is “about” the person who received a letter from the person John praised, even if it is embedded inside an island. Interestingly, island effects do not emerge in some examples of Pronominal Fragments if you omit the postposition/Case-marker on the fragment, as shown in (20).⁹

- (20) a. A: John-ga [[**dareka-ni** tegami-o kai-ta] hito]-o home-ta rasi.

John-Nom **someone-to** letter-Acc write-Past person-Acc praise-Past seem

“It seems that John praised a person who wrote a letter to someone.”

B: Sore-wa **Mary** da-yo.

It-Top **Mary** be

“It is Mary.”

- b. A: John-ga [[**Susan-ni** tegami-o kai-ta] hito]-o home-ta.

John-Nom **Susan-to** letter-Acc write-Past person-Acc praise-Past

“John praised a person who wrote a letter to Susan.”

B: Iya, sore-wa **Mary** da-yo.

no it-Top **Mary** be

“No, it is Mary.”

I will leave the analysis of Non-CM-Pronominal Fragments in (20), and concentrate on the CM-Pronominal Fragments in this paper. I would like to emphasize that CM-Pronominal Fragments show behavior parallel to CM-cleft with respect to islands, as our analysis in Section 3 predicts.

Saito (2003) takes up examples where *sore* in Pronominal Fragments is apparently not island-sensitive, even if it has a Case-marker or a postposition on it.

- (21) A: Kinoo [dokoka-no ginkoo-kara genkin-ga nusumare-ta to-yuu
yesterday somewhere-Gen bank-from cash-Nom be-stolen-Past that
nyuusu]-o kiki-masi-ta.
news-Acc hear-Polite-Past
“I heard the news yesterday that cash was stolen from a bank somewhere.”
- B: *[Op₁ [kinoo [t₁ genkin-ga nusumare-ta to-yuu nyuusu]-o kii-ta] no]-wa
yesterday cash-Nom be-stolen-Past that news-Acc hear-Past C-Top
[Tookyoo Ginkoo-kara]₁ desyoo.
Tokyo Bank-from must-be
“It must be from Tokyo Bank that you heard the news yesterday that cash was
stolen.”
- B’: Sore-wa Tookyoo Ginko-kara desyoo.
it-Top Tokyo Bank-from must-be
“It must be from Tokyo Bank.”

The CM-cleft in (21B) cannot target the *from*-PP inside the complex NP in (21A), but the CM-Pronominal Fragment in (21B’) can. On the surface, this appears to be incompatible with our account of CM-Pronominal Fragment as a CM-cleft. Based on this, Saito claims that deep anaphor *pro* is also an available source for *sore* in Pronominal Fragments. Under this view, *sore* in (21B’) is an overt counterpart of *pro* in (22).

- (22) *pro* Tookyoo Ginko-kara desyoo.
pro Tokyo Bank-from must-be
“It must be from Tokyo Bank.”

Here, *pro* is a deep anaphor that denotes the situation described by the previous context. (22) does not involve any underlying cleft construction, and hence, the lack of island effects is expected.

However, note that (21B) is not the only possible cleft source for (21B’). (23), which takes the TP inside the complex NP in (21A) as its presuppositional clause, is also a possible reply to (21A).

- (23) [Op₁ [t₁ genkin-ga nusumare-ta no]-wa [Tookyoo Ginkoo-kara]₁ desyoo.
cash-Nom be-stolen-Past C-Top Tokyo Bank-from must-be
“It must be from Tokyo Bank that cash was stolen.”

This cleft sentence does not involve any islands. If (21B’) is derived from (23) instead of (21B), we can still hold the parallelism between CM-cleft and CM-Pronominal Fragments with respect to island effects.

On the other hand, the strategy to take only a part of the previous sentence as the source of a cleft is not available in (16). If the relative clause without the head noun in (16) is taken as a source of a cleft, the ungrammatical cleft sentence in (24) would be generated.

- (24) *[Op₁ [Op₂ [t₂ t₁ tegami-o kai-ta]] no]-wa Mary-ni₁ da.
letter-Acc write-Past C-Top Mary-to be
“It is to Mary that t₂ wrote a letter.”

In (24), Op₁ is the cleft operator and Op₂ is a relative clause operator. The derivation in (24) crashes because Op₂ is not associated with any relative clause head NP. If deep anaphora, which can vaguely denote the previous discourse, is the source of Pronominal Fragments, why the corresponding deep anaphora *sore* is unavailable in (16) remains

unclear. This shows that the grammaticality of (21B') is due to the fact that the clause embedded inside the NP is also a possible source of cleft that underlies *sore*.

Furthermore, the claim that *sore* in (21B') is on a par with deep anaphoric *pro* is not compatible with Ueyama's (2000) generalization: the pronoun *sore* always requires a linguistic antecedent unless it is deictic to something that is present in front of the speaker. In the context of (25a), for example, the cake is not in front of Yoko when she uttered the sentence in (25a). This makes it strange to use the pronoun *sore* to refer to the cake. (# in the below example shows the pragmatic deviance.)

(25) a. Context: Yoko gave a cake that she made to Masao yesterday. Yoko wants to know what he thinks about the cake, so she calls him and ask.

Yoko: Nee-nee, *pro/are/#sore* tabe-ta?
 hey *pro/that/#it* eat-Past
 "Hey, did you eat that one/it yet?"

b. Masao: I got a box of chocolate from a high school girl.
 (Yoko has not seen the chocolate yet.)

Yoko: Nee-nee, *pro/#are/sore* tabe-ta?
 hey *pro/#that/it* eat-Past
 "Hey, did you eat that one/it yet?" (Ueyama (2000))

On the other hand, in (25b), the referent of *sore* in Yoko's utterance, i.e., "a box of chocolate", is in the previous discourse. In this case, using *sore* to refer to the chocolate is totally natural. This shows that, unlike *pro*, *sore* cannot have a context referent that is not linguistically realized.

Although (25b) is an example of *sore* that refers to an entity and *sore* in Pronominal Fragments is derived from a cleft under our analysis, they both require a linguistic antecedent. (26) shows that Pronominal Sluicing cannot be licensed merely by discourse.

(26) Context: Bill and friends see John calling someone. Bill thinks he is calling his girlfriend Mary, and says to the other friends:

Bill: *Pro/#Sore-wa* Mary-ni da-yo.
Pro/#it-Top Mary-to be
 "It is to Mary."

The requirement for a linguistic antecedent is incompatible with the claim that *sore* in (21B) is an instance of deep anaphora.

5. Other Types of *No*-Clause and *Sore*

In the previous section, we claimed that the pronoun *sore* in Pronominal Fragments is derived from the subject clause of the cleft attached with the demonstrative *sono*. The next consideration should be whether or not such reduction of clauses into a pronoun is a special property of a cleft. In this section, I will review Kuroda's (1999) analysis of Head-Internal Relative Clauses (HIRCs) and suggest that our analysis can be extended to HIRCs, which also involves the complementizer *no*.

(27) shows two examples of HIRCs in Japanese.

(27) a. Keikan-ga [**doroboo**-ga dete-ki-ta no]-o tukamae-ta.
 policeman-Nom **thief**-Nom come-out-Past C-Acc catch-Past
 "The policeman caught the thief that came out."

b. John-wa [Mary-ga **ringo**-o kat-te ki-ta no]-o tabe-ta.
 John-Top Mary-Nom **apple**-Acc buy-and bring-Past C-Acc eat-Past
 "John ate the apple that Mary bought."

(28) a. Keikan-ga [[Op₁ [t₁ dete-ki-ta]] **doroboo**]-o tukamae-ta.
 policeman-Nom come-out-Past thief-Acc catch-Past
 "The policeman caught the thief that came out."

- b. John-wa [[Op₁ [Mary-ga t₁ kat-te ki-ta]] ringo]-o tabe-ta.
 John-Top Mary-Nom buy-and bring-Past apple-Acc eat-Past
 “John ate the apple that Mary bought.”

The examples in (27) have roughly the same meaning as the corresponding Head-External Relative Clause (HERC) in (28). Unlike HERCs, however, the head nouns of HIRCs (“thief” and “apple,” respectively) stay in their thematic positions and the nominalizing complementizer *no* marks the whole clause. One of the nominal elements inside the *no*-marked clause is interpreted as a head noun.

As Tsubomoto (1995) observes, if a HIRC is in the object position, another optional object *sore* can appear after the HIRC, as shown in (29).

- (29) Keikan-ga [doroboo-ga dete-ki-ta no]-o **sore-o** tukamae-ta.
 policeman-Nom thief-Nom come-out-Past C-Acc **it-Acc** catch-Past
 “The policeman caught the thief that came out.”

(29) is an acceptable sentence for many Japanese speakers, although how this *sore* is given interpretation is, at first sight, not clear. As we have seen, *sore* cannot refer to a person, e.g., the thief. Even if we interpret *sore* to denote the situation described by the HIRC, it is still odd because “a situation” cannot be a direct object of the verb *tukamae-ru* “catch”. Furthermore, (29) seems to violate the theta-criterion because the verb “catch” selects two Accusative-marked internal arguments: the HIRC and *sore*.¹¹

Kuroda points out that the sequences *no-ga*, *no-o*, *no-ni*, are ambiguous between the complementizer *no* followed by a Case-marker (-*ga* “Nom”, -*o* “Acc” and -*ni* “Dat”) and conjunctives that mean “although.” (30) shows examples of conjunctive *no-ga*, *no-o* and *no-ni*.

- (30) [Gozentyuu-wa ame-ga hut-tei-ta **no]-ga/o/ni**
 in-the-morning-Top rain-Nom fall-Prog-Past **although**
 gogo-ni nat-te hi-ga teri-dasi-ta.
 afternoon-Dat become-and sun-Nom shine-start-Past
 “Although it was raining in the morning, the sun started shining in the afternoon.”

In this example, neither the clause “it was raining in the morning” nor the noun inside it, i.e., “rain”, can be an argument of the following clause. Such type of *no*-clause must be interpreted as an adverbial clause.

Given this, Kuroda argues that (31) is the underlying structure of (29).

- (31) Keikan-ga [[doroboo-ga dete-ki-ta **no]-o]_{Adv}
 policeman-Nom thief-Nom come-out-Past **although**
 [doroboo-ga dete-ki-ta no]_{HIRC}-o tukamae-ta.
 thief-Nom come-out-Past C-Acc catch-Past
 “Although the thief came out, the policeman caught the thief that came out.”**

(31) involves two identical *no*-clauses. Under Kuroda’s analysis, the first one is interpreted as an adverbial clause, and the second one is a “real” HIRC, which is followed by a real case-marker and is interpreted as the object of the verb “catch”. Since the *no*-clause has the same content as the first one, it undergoes pronominalization and generates the pronominal object *sore-o* in (29). In short, Kuroda claims that the apparent HIRC in (29) is actually an adverbial clause, and the real HIRC underlies the pronoun *sore*.¹²

Kuroda’s analysis is very similar to our analysis of Pronominal Fragments in that a *no*-headed clause is replaced with a pronoun *sore*. Recall that our claims about the cleft subject sentence are the following: (i) the *no*-headed clause involves a DP whose complement is a CP, because it is a Case-marked clause, (ii) *sore* is a residue of the demonstrative *sono* and is derived by a CP-deletion. The HIRC is also headed by the complementizer *no*, and is a Case-marked clause. Given the similarities, adopting the

analysis in Section 3 to Kuroda’s analysis of (29) should be promising. We would get an underlying structure in (32a), which will undergo CP-deletion in (32b) and generate (29).

- (32) a. Keikan-ga [DP [CP [IP doroboo-ga dete-ki-ta] no]-o
 policeman-Nom thief-Nom come-out-Past C-Acc
 [DP **sono** [CP [IP doroboo-ga dete-ki-ta] no]]-o tukamae-ta.
the thief-Nom come-out-Past C-Acc catch-Past
 “Although the thief came out, the policeman caught the thief that came out.”
- b. Keikan-ga [DP [CP [IP doroboo-ga dete-ki-ta] no]]-o
 Policeman-Nom thief-Nom come-out-Past C-Acc
 [DP **sore** [~~CP [IP doroboo-ga dete-ki-ta] no~~]]-o tukamae-ta.
it thief-Nom come-out-Past C-Acc catch-Past

The following example further supports the claim that HIRCs can be reduced to *sore*.

- (33) Doroboo-ga mise-kara dete-ki-ta. Keikan-ga **sore-o** tukamae-ta.
 Thief-Nom store-from come-out-Past policeman-Nom **it-Acc** catch-Past
 “The thief came out of the store. The policeman caught it.”

Unlike (29), (33) has no surface HIRC that is a potential object for the verb “catch”. In this example, the verb “catch” in the second sentence unambiguously takes *sore* as an internal object. Again, *sore* cannot just refer to *doroboo* “thief” because of the animacy agreement. Further, it cannot refer to the whole content of the first sentence because of the selectional restriction of the verb “catch”. If we assume that HIRC underlies *sore* in (33), as shown in (34), both the lack of animacy and the ability to be the direct object of “catch” are naturally explained.

- (34) Keikan-ga [DP sono [CP [IP doroboo-ga mise-kara dete-ki-ta] no]]_{HIRC-O}
 Policeman-Nom the thief-Nom store-from come-out-Past C-Acc
 tukamae-ta.
 catch-Past
 “The policeman caught the thief that came out of the store.”

Since the content of the HIRC in (34) is identical to the preceding sentence in (33), the HIRC can undergo CP-deletion and is reduced to *sore*.

Our analysis predicts that if a HIRC is impossible in a certain environment, then *sore* referring to an element in the previous sentence should also be impossible. This prediction is borne out by examples such as (35).

- (35) a. *Keikan-ga [John-no sai-hu-ga **doroboo-ni** tora-re-ta no]-o
 policeman-Nom John-Gen wallet-Nom **thief-by** be-stolen-Past C-Acc
 tukamae-ta.
 catch-Past
 “The policeman caught the thief that John’s wallet was stolen by.”
- b. *John-no sai-hu-ga **doroboo-ni** tora-re-ta.
 John-Gen wallet-Nom **thief-by** be-stolen-Past.
 Keikan-ga **sore-o** tukamae-ta.
 policeman-Nom **it-Acc** catch-Past
 “John’s wallet was stolen by the thief. The policeman caught it.”

Although subjects and objects can be the head of HIRCs depending on the situation (see (27)), adjunct PPs such as the *by*-phrase of passives cannot be the head of HIRCs, as shown in (35a).¹³ Similarly, the second sentence in (35b) does not allow the reading in which the policeman caught the thief. This is naturally explained by our analysis, which claims that this pronoun *sore* is derived from the HIRC in (35a).

So far, we have seen that both the subject clause of a cleft and a HIRC can be reduced to the pronoun *sore*. However, it is not the case that any clause that can be attached to a

demonstrative *sono* can be replaced with *sore*. For instance, let us consider an example of a HERC in (36).

(36) Sinbun-ni dete-ita doroboo-wa [[John-ga tukamae-ta] doroboo/**no**] da.
newspaper-Dat appear-Prog thief-Top John-Nom caught-Past thief/**one** be
“The thief that was in the newspaper is the thief/one that John caught.”

Note that the head noun *doroboo* “thief” of the HERC can be replaced with *no*. With this *no*, the HERC looks similar to the subject clause of the (pseudo-)cleft in (37).

(37) [[John-ga tukamae-ta] no]-wa doroboo(-o) da.
John-Nom catch-Past C-Top thief(-Acc) be
“It is a thief that John caught./What John caught was a thief.”

However, it is not the case that HERCs with *no* can be replaced with *sore* even if it can be attached to the demonstrative *sono*.

(38) a. [Sinbun-ni dete-ita doroboo]-wa
newspaper-Dat appear-Prog thief-Top
[sono [John-ga tukamae-ta] doroboo/no] da.
the John-Nom caught-Past thief/one be
“The thief that was in the newspaper was the thief/one that John caught.”
b. *[Sinbun-ni dete-ita doroboo]-wa **sore** da.
newspaper-Dat appear-Prog thief-Top **it** be
“The thief that was in the newspaper is it.”

If the corresponding HERC denotes a person, it cannot be the referent of the inanimate pronoun *sore*, as shown in (38b). This example contrasts with examples of Pronominal Fragments, where *sore* has a clausal status and thus shows no animacy agreement.

There are several differences between *no* in HERCs and *no* in the (pseudo-)cleft subject; *no* in HERCs is traditionally analyzed as a pronoun “one”, while *no* in the (pseudo-)cleft construction is analyzed as a complementizer. I would like to review three such differences here. First, the presuppositional clause of (pseudo-)cleft cannot appear in the predicate position before the copula; the (pseudo-)cleft construction in Japanese does not allow inversion between the subject sentence and the focused element, as shown in (39).¹⁴

(39) *Doroboo-wa [[**John-ga tukamae-ta**] **no**] da.
thief-Top John-Nom catch-Past C be
“A thief was what John caught.”

Second, *no* in HERCs can be used to refer to human nouns only if it involves a derogatory connotation (Kuroda (1976, 1977)). In (36), *no* can replace *doroboo* “thief” because thieves are derogated. However, when the HERC head noun is *sensei* “teacher” as shown in (40), it cannot be replaced with *no*.

(40) Sono sensei-wa [[John-ga sonkeisi-teiru] sensei/*no] da.
the teacher-Top John-Nom respect-Prog teacher/one be
“The teacher is the teacher/*one that John respects.”

There is no such restriction on (pseudo-)cleft *no*, as shown in (41) (Kizu (1999)).

(41) [[John-ga sonkeisi-teiru] no]-wa sono sensei(-o) da.
John-Nom respect-Prog C-Top the teacher(-Acc) be
“It is the teacher that John respects./ What John respects is the teacher.”

Third, Kizu (1999) notes that adjectives can be inserted between *no* and the preceding clause in HERCs, but not in the (pseudo-)cleft construction, as shown in (42).

(42) a. Sono ringo-wa [[John-ga kat-ta] oisii ringo/no] da.
the apple-Top John-Nom buy-Past delicious apple/one be
“The apple was the delicious apple/one that John bought.”
b. *[[John-ga kat-ta] oisii no]-wa ringo(-o) da.
John-Nom buy-Past delicious C-Top apple(-Acc) be

“It is an apple the delicious one John bought.”

With the above discussion in mind, let us turn to the properties of *no* in HIRC. HIRC does not co-occur with a copula, so the first criterion cannot be tested. As for the second and the third criteria, *no* in HIRC shows the same properties as *no* in the (pseudo-) cleft construction; it can be used for humans without any derogatory meaning ((43a)), and the insertion of adjectives between the clause and *no* is impossible ((43b)).

- (43) a. John-ga [**sensei**-ga dete-irassyat-ta no]-o omikakesi-ta.
John-Nom teacher-Nom come-out_(subj.hon.)-Past C-Acc see_(obj.hon.)-Past
“John saw the teacher that came out.”
- b. *Mary-ga [John-ga ringo-o kat-ta **oisii** no]-o tabe-ta.
Mary-Nom John-Nom apple-Acc buy-Past **delicious** C-Acc eat-Past
“Mary ate the delicious apple that John bought.”

These differences are the basis for the standard dual analysis under which *no* in (pseudo-)clefts and HIRC is a complementizer, while *no* in HERC is a pronoun (Musarugi (1991), Hoshi (1995), among others). Recall that under our analysis, the presuppositional clauses in the cleft construction and HIRC can be reduced to the pronoun *sore*. If this analysis is on the right track, we can make the following generalization about the condition on which clauses undergo the CP-deletion and become the pronoun *sore*.

(44) The CP-deletion is licensed in the configuration [_{DP} **sono** [_{CP} ... **C_{no}**] **D**].

This is just a preliminary generalization. We further need to clarify what property of the complementizer *no* makes the CP-deletion possible and how HERC and (pseudo-)cleft sentences make a natural class.

6. Conclusion

In this paper, we have seen that the properties of the pronoun *sore* in Pronominal Fragments are naturally explained under the assumption that it is derived from a (pseudo-) cleft. I showed that the CP-deletion mechanism proposed in Nakao and Yoshida (2005) for Pronominal Sluicing is applicable to all types of Pronominal Fragments, based on the fact that they all show the same properties with respect to reconstruction effects and island effects. I further showed that our analysis is applicable to Kuroda’s (1999) analysis of *sore* following HIRC. I made the generalization about where clauses can be truncated into *sore*: the CP-deletion that generates *sore* from clauses is licensed by the complementizer *no*.

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1 I use the following abbreviations in the gloss: Nom; nominative Case marker, Acc; accusative Case marker, Dat; dative Case marker, Gen; genitive Case marker, Top; topicalization marker, C; (non-interrogative) complementizer, D; determiner, Q; interrogative complementizer, Past; past tense marker, Prog; progressive aspect marker, Polite; polite ending morpheme, Adv.; adverbial clause, Subj.Hon.; subject-honorificational, Obj.Hon.; object-honorificational.

2 The pronoun *sore-ga* “it-Nom” in Japanese Sluicing in (1c) is optional, as shown in (i).

- (i) John-ga dareka-ni at-ta ga, watasi-wa dare-ni (da) ka wakara-nai.
John-Nom someone-Dat meet-Past but I-Top who-Dat (be) Q know-not
“John wrote a letter to someone, but I don’t know who.”

I will concentrate on examples with *sore* in this paper. For the difference between Japanese Sluicing with and without *sore*, see Nakao and Yoshida (2005).

3 The matrix subject in Japanese usually undergoes topicalization; the pronoun *sore* in (1a, b) has a topic marker *-wa* rather than the Nominative Case-marker *-ga* on it.

4 As noted in Note 1, *sore* in Japanese Sluicing is optional. Japanese Sluicing without *sore*, unlike (4c), does not show the Binding Connectivity effect, as shown in (i).

- (i) *John₁-ga dareka-o hihansi-ta ga,
John-Nom someone-Acc criticize-Past but
watasi-wa zibun-zisin₁-o kadooka wakara-nai.
I-Top self-self-Acc whether know-not
“John₁ criticized someone, but I don’t know whether himself₁.”

This difference implies that Pronominal Sluicing and Japanese Sluicing without *sore* are different types of constructions. As an anonymous reviewer points out, however, some people accept examples like (ii) without the embedded subject.

- (ii) John₁-ga dareka-o hihansi-ta ga, zibun-zisin₁-o kadooka wakara-nai.
John-Nom someone-Acc criticize-Past but self-self-Acc whether know-not
“John₁ criticized someone, but I don’t know whether himself₁.”

The cause of the ungrammaticality of (i) is irrelevant to the discussion here, so I would like to leave this issue open.

5 The anaphor *zibun-zisin* “self-self” is a local anaphor and obeys the same kind of locality condition as the English anaphor *himself*. Unlike another Japanese anaphor *zibun* “self”, it does not take a long-distance antecedents, as shown in (i).

- (i) John₁-wa [Mary₂-ga zibun_{1/2}-o/zibun-zisin_{*1/2}-o hihansi-ta to] it-ta.
John-Top Mary-Nom self-Acc/ self-self-Acc criticize-Past that say-past
“John₁ said that Mary₂ criticized self_{1/2}/self-self_{*1/2}.”

6 These studies treat Pronominal Sluicing and Japanese Sluicing without *sore* in the same way. We only deal with examples of Pronominal Sluicing in this paper.

7 Nakao and Yoshida (2005) show some evidence that the focus construction that underlies Pronominal Sluicing shows the properties of a specificational pseudo-cleft. Unlike English cleft and pseudo-cleft in (i), however, the Japanese focus construction in (ii) does not show the cleft/pseudo-cleft distinction. Whether the string is a cleft or a pseudo-cleft is irrelevant to the discussion here, so I will refer to the construction in (ii) as a (pseudo-)cleft.

- (i) a. It is a book that John bought. (cleft)
b. What John bought is a book. (pseudo-cleft)
(ii) John-ga kat-ta no-wa hon(-o) da.
John-Nom buy-Past C-Top book(-Acc) be
“It is a book that John bought./ What John bought is a book.”

8 It is well-known that English Sluicing, unlike Japanese Sluicing in (16c), shows island-repair phenomena. (See Ross (1969), Merchant (2001), among others.) For example, the Complex NP Constraint violation in (ia) is remedied by Sluicing the second conjunct as shown in (ib).

- (i) a. *She kissed a man who bit one of my friends, but Tom doesn’t realize which one of my friends she kissed a man who bit. (Ross (1969))
b. ?She kissed a man who bit one of my friends, but Tom doesn’t realize [CP which one of my friends₁ [_{IP} she kissed [a man who bit t₁]]].

English Sluicing is traditionally explained as wh-movement followed by IP-deletion. On the other hand, we analyze Japanese Pronominal Sluicing as CP-deletion. We need to consider why this CP-deletion does not repair islands, as IP-deletion in (ib) does. I would like to leave this issue for future research.

9 Hoji (1990) treats a cleft with a Case-marker and a cleft with a postposition uniformly as a CM-cleft. The operator movement analysis illustrated in (18), however,

might be problematic for the cases of a cleft with a postposition. It is not compatible with the cross-linguistic generalization that PPs cannot be null operators. For example, headless relative clauses with a PP operator are impossible, unlike those with a DP operator, as shown in (i). See Jaeggli (1982), Lasnik and Stowell (1991), and others for relevant discussions.

- (i) a. [Mary laughed at [_{DP} the person]₁ [_{CP} Op₁ John was looking at t₁]].
 b. *[Mary laughed [_{PP} at the person]₁ [_{CP} Op₁ John was looking t₁]].
 (Hornstein, Nunes and Grohmann (2005, to appear))

10 Unlike the examples in (20), island effects cannot be remedied in Pronominal Sluicing even if it is not Case-marked.

- (i) *John-ga [[**dareka-ni** tegami-o kai-ta] hito]-o home-ta ga,
 John-Nom **someone-to** letter-Acc write-Past person-Acc praise-Past but
 watasi-wa sore-ga **dare** (da) ka wakara-nai.
 I-Top it-Nom **who** (be) Q know-not
 “John praised a person who wrote a letter to someone, but I don’t know who.”

The non-Case-marked examples are out of the scope of this paper, so I will leave why this is the case for future research.

11 (29) also apparently violate Double-*o* Constraint, which is a Japanese-specific rule that prohibits double Accusative (-*o*) phrases. For example, External Possessor Construction in Japanese is possible in Nominative-marked positions, but not in Accusative-marked positions, as shown in (i). (See Ueyama (1999).)

- (i) a. John-ga oneesan-ga kirei da.
 John-Nom sister-Nom beautiful be
 “John’s sister is beautiful.”
 b. *Mary-ga John-o oneesan-o home-ta.
 Mary-Nom John-Acc sister-Acc praise-Past
 “Mary praised John’s sister.”

Although (ib) is fine in other languages that have External Possessor Construction, such as Korean, it is excluded in Japanese because it involves two consecutive Accusative phrases and thus violates Double-*o* Constraint.

12 As for the HIRC examples without *sore* (such as (27)), Kuroda assumes two underlying structures in (ia) and (ib).

- (i) a. Keikan-ga [doroboo-ga dete-ki-ta no]_{HIRC}-o tukamae-ta.
 policeman-Nom thief-Nom come-out-Past C-Acc catch-Past
 “The policeman caught the thief that came out.”
 b. Keikan-ga [doroboo-ga dete-ki-ta no]_{Adv}-o *pro* tukamae-ta.
 policeman-Nom thief-Nom come-out-Past C-Acc catch-past
 “The policeman caught the thief that came out.”

Such a *no*-clause is ambiguous between a real HIRC in (ia) and an adverbial clause that is followed by a null object (ib).

13 This paper will not examine what elements can be the head of HIRCs, and why some elements cannot be the head of HIRCs.

14 Unlike *no* in (36), *no* in (39) cannot be interpreted as a pronoun “one”, given the subject *doroboo* is an indefinite expression. The sentence “a thief is the thief/one that John caught” would not make any sense; the indefiniteness of the subject *doroboo* would semantically conflict with the restricting relative clause on the pronominal *no*.

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